

The Cell Cycle

Interphase: the preparation for mitosis

Prophase:

Metaphase:

Anaphase:

Telophase:

Cytokinesis - Plants

Cytokinesis - Animals

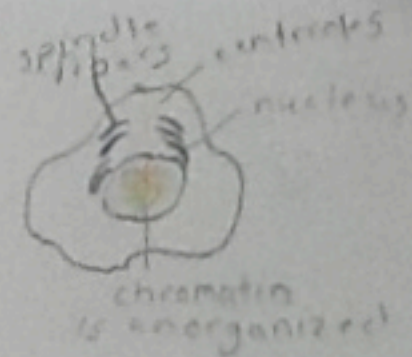
Interphase:

G₁ - cells grow and make proteins

G₀ - cells do not divide either because of environment or not needed

S - DNA replication, cells double amount of DNA

G₂ - preparing for cell division



Interphase: the preparation for mitosis

Prophase:

Metaphase:

Anaphase:

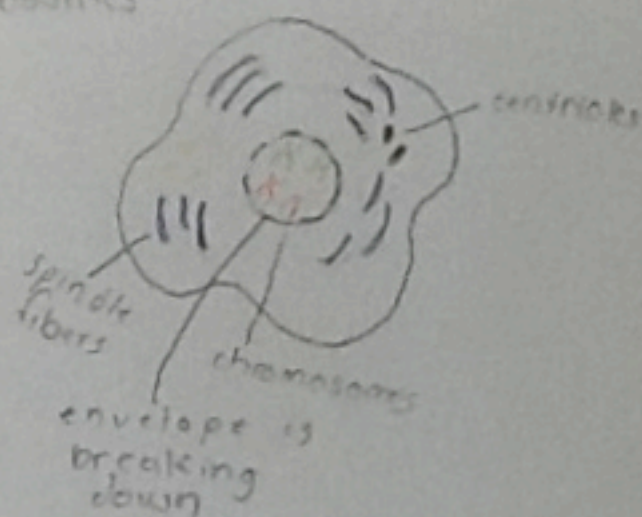
Telophase:

Cytokinesis - Plants

Cytokinesis - Animals

- chromatin condenses to form chromosomes
- duplicated chromosomes are visible
- spindle fibers start to form
- nuclear envelope breaks down
- centrioles spread to opp. poles

Pro = before



Prophase:

Metaphase:

Anaphase:

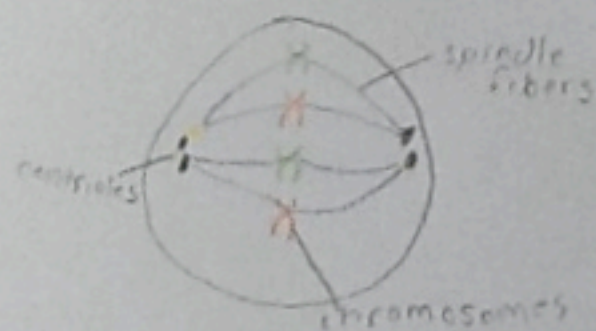
Telophase:

Cytokinesis - Plants

Cytokinesis - Animals

- chromosomes line up across the center of the cell
- each chromosome is connected to spindle fiber at centromere
- no nuclear envelope

M = middle



Metaphase:

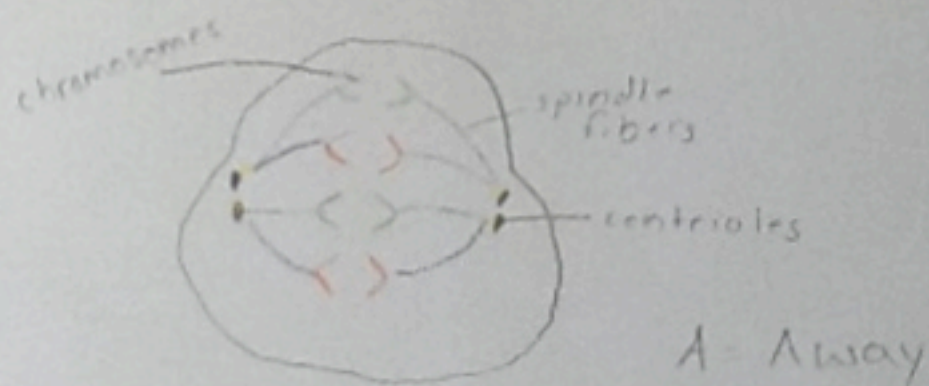
Anaphase:

Telophase:

Cytokinesis - Plants

Cytokinesis - Animals

- Sister chromatids separate into individual chromosomes
- Individual chromosomes are moved apart



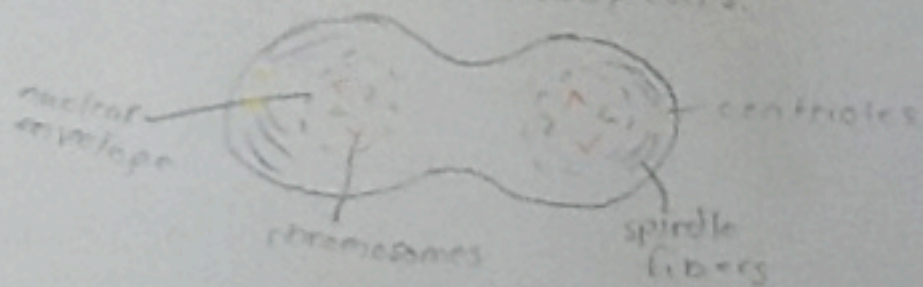
Anaphase:

Telophase:

Cytokinesis - Plants

Cytokinesis - Animals

- chromosomes gather at opposite ends of the cell and lose distinct shapes
- 2 new nuclear envelopes will form
- spindle breaks and disappears.



Telophase:

Cytokinesis - Plants

Cytokinesis - Animals

- cell plate forms between divided nuclei
- it then develops into a membrane and eventually a new cell wall
- The cell wall separates into 2 identical daughter cells



Cytokinesis - Plants

Cytokinesis - Animals

- division of cytoplasm
- splits one cell into 2 distinct cells



Cytokinesis - Animals

Looked this over in poor lighting, added centrioles + then realized they were always there just 'light yellow, sorry'.

• Cytokinesis - Chromosomes should not be duplicated (x's).